

ABSTRACT

A slab type solid-state laser oscillating device in which a beam quality is improved in a width direction. A slab type laser medium comprising a YAG laser crystal and having opposite end faces cut at an angle approximately satisfying the Brewster's condition in a section along a thickness direction is subjected to laser pumping by an excitation light. A bending mirror is arranged close to one end face of the laser medium, and partial and total reflection mirrors are obliquely arranged adjacent to each other and close to the other end face of the laser medium. In the slab type laser medium, a zigzag optical path repeating total reflections is formed in a section along the thickness direction. As the laser beam obliquely travels in the section along the width direction of the slab type laser medium, a phase deviation caused by refractive index gradient is lowered to thereby prevent a reduction in quality of the output beam with respect to the width direction.